

REMARKS

Applicant acknowledges, with appreciation, the indication that claims 4 and 10 contain allowable subject matter. Claims 1-10 and 12 are currently pending, with claims 1, 3, 6 and 8 being the independent claims. The Specification has been amended. Claims 1-10, and 12 have been amended. The amendment to the claims are to correct minor claim wording, and are cosmetic in nature. Reconsideration of the application, as amended, is respectfully requested.

Claim 12 is also pending in the present application. This claim was added by Preliminary Amendment that was filed on September 27, 2001. However, there is no indication that this claim has been considered. An acknowledgement that this claim was entered and considered is requested. Moreover, since claim 12 depends from claim 4 which was indicated to contain allowable subject matter, Applicant will assume that claim 12 is also allowable.

Claims 1-10 were objected to because of certain informalities. Specifically, claims 1-10 were objected to because they listed reference numerals with parentheses. In response to this objection, Applicant has amended the claims to remove the reference numerals with parentheses. Withdrawal of this objection is therefore in order.

In the April 19, 2005 Office Action, independent claims 1, 3, 6 and 8, and dependent claims 2, 5 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,631,896 ("*Kawase*") in view of U.S. Patent No. 6,678,259 ("*Schwengler*").

The present invention is a method and apparatus for changing parallel transmission connections of a data transmission link. Here, a transmission path to be received is changed prior to the passage of errors. As a result, the data transmission link remains free of errors, in case at least one of the transmission paths transmits error free data, even if errors occur in other transmission paths. In addition, the error-free quality of the link is maintained when an error-free data transmission path rapidly changes over to an erroneous mode and an erroneous data transmission path changes over to an error-free state (see pg. 2, lines 17-24 of the specification).

In contrast, *Kawase* relates to a hitless path switching apparatus and method which is suitable for SDH (Synchronous Digital Hierarchy), SONET (Synchronous Optical Network) and ATM (Asynchronous Transfer Mode) transmission systems (see col. 1, lines 9-12). *Kawase* (col. 2, lines 24-28) states, the apparatus performs the working-to-protection path switching as soon as a bit error on a data block of the working path is detected, even if alarms indicating transmission failures, such as loss of a frame or loss of a signal, are not detected.

The Office Action (pg. 2-3) states:

Kawase et al. teach a hitless path switching apparatus and method in digital communication systems (method for changing parallel signals in a digital data transmission, including over a radio link), in which transmission is parallel in both working and protection paths (in which method the data flow to be transmitted is divided into several transmissions (See Fig. 12) comprising steps of

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- the switching of clock path is waiting on the convergence of the phase adjusting and error comparison (a clock signal is changed over after waiting for a sufficiently accurately cophasal clock signals) (See Fig. 12, Col 9, lines 40-53), and
- the information in the data flow of the processed section of the selected transmission path is conducted to the output cable (72) (See Fig. 12, Col 9 lines 40-53).

Kawase fails to teach the steps of “changing a clock signal after waiting for a sufficiently accurately cophasal clock signals, and forwarding information in the data flow of the processed section of the selected transmission path to an output cable,” as recited in amended independent method claim 1.

Applicant acknowledges that *Kawase* discloses SDH, SONET and ATM switching. However, the solutions proposed in *Kawase* to shorten the time interval from the occurrence of a failure to the completion of switching fails to take into account special characteristics associated with radio transmission. For example, *Kawase* fails to provide any solutions which are needed to transmit clock signals over a transmission link, which is an essential part of the invention recited in amended independent method claim 1.

Kawase fails to teach or suggest a solution for avoiding problems due the change of the clock signal path, which is accomplished by “waiting for a sufficiently accurately cophasal clock signals”, before “changing the path for the clock signal,” as recited in amended independent method claim 1.

Kawase (col. 9 lines 44-47) teaches the removal of signal feed lines which flow from signal feed circuits to bit error detecting circuits. However, this is unrelated to “forwarding information in the data flow of the processed section of the selected transmission path to an output cable,” as recited in independent claim 1. *Kawase* (col. 9, lines 47-51) teaches the provision of phase adjusted signals from phase adjusting circuits to the bit error detecting circuits so as to detect a bit error after matching the phases of the received line signal of the two paths. There is nothing in this section of *Kawase* that relates to switching the path of a clock signal, as

recited in method claim 1.

The Examiner relies upon *Schwengler* to address the failure of *Kawase* to teach the step of “changing parallel signals in a digital data transmission over a radio link”. *Schwengler* relates to a system and method for broadband communication between a network and a customer premise along a line of sight path that utilizes a redundant or secondary link to overcome the problems associated with long term obstructions (see col. 1, lines 59-64).

Schwengler (col. 1, lines 48-50) teaches first and second direction antennas 18, 20. *Schwengler* (col. 1, lines 50-57) states, “access to a network 16 is brought to customer premise 12 through first and second hubs 24 and 26, respectively. Hub 24 is connected to network 16 by link 28, while hub 26 is connected to network 16 by link 30. First directional antenna 20 is operative to communicate in a first line of sight 32. Second directional antenna 22 is operative to communicate in a second line of sight 34.” *Schwengler* (col. 1, lines 57-60) further states, “antennas 20 and 22 are highly directional in nature due to the high frequencies involved; however, it is preferred that hubs 24 and 26 broadcast information in a non-directional manner.”

However, *Schwengler* fails to cure the deficiency of *Kawase*, since the system achieved by the combination of *Kawas* and *Schwengler* still fails to include the steps of “changing a clock signal after waiting for a sufficiently accurately cophasal clock signals, and forwarding information in the data flow of the processed section of the selected transmission path to an output cable,” as recited in amended independent method claim 1. Consequently, independent claim 1 is patentable, and withdrawal of the rejection under 35 U.S.C. §103 is in order, and a notice to that effect is earnestly solicited.

Moreover, the present application is a National Stage application that is entitled to claim priority to foreign application Serial No. 990739 filed on April 1, 1999 in Finland. *Schwengler* has a filing date of May 26, 1999, which is subsequent to the filing date of the priority document (i.e., April 1, 1999), upon which the present application claims priority. Therefore, *Schwengler* does not qualify as prior art. As a result, the deficiencies of *Kawase* still remain. Independent claim 1 is patentable, and withdrawal of the rejection under 35 U.S.C. §103 is in order for this additional reason, and a notice to that effect is earnestly solicited.

Independent claims 3, 6 and 8 are apparatus claims associated with the method of independent claim 1. Accordingly, independent claims 3, 6 and 8 are patentable over the combination of the cited references for the reasons discussed above with respect to independent method claim 1.


In view of the patentability of independent claims 1, 3, 6 and 8, for the reasons set forth above, dependent claims 2, 4, 5, 7, 9 and 12 are all patentable over the prior art.

Based on the foregoing amendments and remarks, this application should be in condition for allowance. Early passage of this case to issue is respectfully requested.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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